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THE INTERNATIONALIZATION OF PRODUCTION

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ABSTRACT

The degree of internationalization of the enterprise or business sectors of many countries, as measured by the ratio of direct investment abroad to domestic wealth or assets, or of assets or employment abroad to that at home, has been growing over the last twenty years or more. The exception to this trend is the United States, in which the extent of internationalization, after growing until the 1970s, has stagnated or decreased somewhat.

The level of internationalization of U.S. firms in the 1970s and 1980s was above that of Germany and especially above those of Japan and Korea. Canada was close to the U.S. and UK firms were by far the most internationalized. The differences among the country levels and trends seem to reflect country size and divergences between the competitiveness of countries and of their companies, including those that result from exchange-rate movements.

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THE INTERNATIONALIZATION OF PRODUCTION

The steady stream of news about acquisitions, mergers, and joint ventures across international borders suggests that firms operating in more than one country are coming to control more and more of the world's trade, production, investment, and employment. This paper asks whether there is such a trend. Do the reports represent simply the rapid growth of certain large firms or firms from a few countries, or do they represent a widespread shift toward internationalization in which more and more of the production by firms based in each country is carried out in other countries?

There is now a large literature on the factors that cause individual firms from one country to invest in production in other countries. A necessary condition for such investment is that the investing, or parent, firm possess some firm-specific advantages that enable it to operate in foreign countries where local firms have the advantages of better knowledge of consumer and factor markets, the favor of local governments, and possibly of consumers as well. While these firm-specific assets are a necessary condition for direct investment, they are not a sufficient condition; if trade were free, a company might exploit its advantages by exporting to each market. There must be some rewards that tempt firms to produce outside their home countries.

The literature on direct investment provides a variety of explanations for international production. Many answers may be needed because there may be many motivations, varying with the firm involved, the industry, the home country, and the host country, and the time at which the decision is made.

One extreme case is an industry in which trade is impossible. That could be because of the bulkiness of the product, the difficulty or expense of moving it from one place to another, or legal or institutional requirements. This case is probably most characteristic of service industries and public utilities. A railroad or retail electric utility must produce in a country to sell there. Other examples are construction, retailing, hotels, and other consumer services.

A more common case is that in which trade can take place, but local production is the cheapest, or most efficient, or most profitable way of serving a market even though it could be served by exporting from the home country. The advantage of local production might be a reduction in transport or tariff costs to that market. Automobile assembly in a market, as compared with the export of fully-assembled cars, is an example that involves savings on transport cost and, in many markets, the evasion of tariffs or other restrictions.

A third case is that in which a host country is the cheapest location for production to serve the world market, sometimes including the home market. Primary production, where the abundance and cheapness of natural resources is the attraction, has historically been the major example. Within manufacturing, there is the example of semiconductor assembly in Southeast Asia, where the low cost of labor has been crucial.

Finally, there is the situation in which a firm can expand its market in a country by producing there, as opposed to exporting to it from the home base. One reason might be that for certain types of products, particularly complex or intricate ones for which after-sales service, consulting, and advice are important, the implicit assurance of the firm's continued presence in the market is an important selling point. A commitment to distribution facilities in a country is probably more convincing in this respect than selling through agents, and a commitment to complete production in a country more convincing than distribution facilities. It is said that buyers of complex machinery often prefer to buy from sellers producing in their countries for these reasons. A production facility in a country may also gain for the firm the advantage of familiarizing local buyers with the firm's name and reputation, so that production of one product in a host country may increase the demand there for other products of the same firm, even imported products.

While these could all be described as factors pulling firms away from their home bases, there also may be forces originating at home that push them to foreign production if they possess firm-specific advantages. For example, Swedish multinationals in the clothing and textile industries shifted some production even for the Swedish market to Portugal and other low-wage countries, especially during the 1960s and early 1970s, as Swedish wages became too high for home production in this industry (Swedenborg, 1982, pp. 81, 101, 283-286, 290). There were many reports of U.S. firms shifting production to foreign locations when the exchange value of the dollar made production in the U.S. too expensive and uncompetitive. And recently there have been reported cases of Japanese firms shifting their production to lower-cost Asian countries to mitigate the effects of the large rise in the exchange value of the Yen. Thus, an increase in the extent to which a country's firms produce abroad could reflect a gain in the competitiveness of the country's firms, but it could also reflect a loss in the competitiveness of the country itself as a location for production.

Another influence on the extent of internationalization of a country's enterprises is the composition of the country's production and shifts in it. Although data are fragmentary, there is evidence that service industries have typically been less international in their operation than primary production or manufacturing industries. That may be a consequence of the higher degree of national regulation in service industries but may also represent a greater degree of difficulty in these industries in transferring a company's competitive advantages from one location to another (Lipsey, 1987, p. 54). Whatever the reason, the result may be that the extent of internationalization tends to be reduced by the worldwide growth in the importance of service industries. An offsetting influence is the increasing degree of direct investment within the service industries (United Nations, 1988, Chapters XXI-XXII). The proportion of most countries' direct investment abroad that is in these industries has been rising substantially.

It is not obvious what measure of internationalization would be most informative. There are data for individual firms in the United States and in a few other countries on the proportions of their sales and assets in foreign operations, but they are usually confined to samples of the largest firms and give no indication of changes in the importance in the economy of the reporting firms or their shares in overseas activity. They also suffer from inconsistencies in the extent of consolidation in company reporting and in accounting for intrafirm transactions. Although these data are not without interest, we have chosen to concentrate on internationalization measures that consist of ratios of foreign to domestic activity of a country's firms or a country as a whole.

In the internationalization measures we have chosen, the numerators are the amounts of direct investment or the size of direct investment operations in terms of assets or employment. We prefer the asset or employment measures because they come closer to reflecting the amount of economic activity conducted abroad by affiliates controlled by parents based in a home country. Value added or output would be the best measures but are not available. However, we sometimes can produce measures for assets or employment, and we use them when we can. Unfortunately, we must often rely, especially for long time series, on measures of the amount of direct investment or what is called the "direct investment position," which is a calculation of the amount of investment by parent companies in the form of holdings of equity or debt. It tends to underestimate the level of activity because it omits, for example, the activity financed by local or other lenders. Furthermore, in the case of the United States, at least, the trends are very different for the different internationalization measures, and the direct investment position is biased downward relative to the other measures.

The denominators are, preferably, aggregate measures for each economy of total corporate or enterprise assets or of employment or national wealth. The ratios are affected by such characteristics of a country as the share of corporations in total wealth, as compared with households, governments, and non-corporate enterprise. We would, ideally, like to compare across countries the extent of internationalization and changes in it for the economy as a whole and for the enterprise and corporate sectors. That is only possible to a very limited extent because of the lack of comparable numerators and denominators among countries. We have focussed, therefore, on changes within countries in whatever internationalization measures are available for each one. However, we do later summarize the very limited comparisons we can make across countries for recent years.

Trends in the Internationalization of U.S. Firms

The Beginnings of U.S. Direct Investment Abroad

The U.S. has been unique among the major investing countries in that the principal form of its investment has been, from the earliest times recorded, direct rather than portfolio investment. That is, it has typically involved control of foreign operations rather than simply the lending of capital to foreign-controlled firms or to governments. The earliest estimates, for 1897, show over 90 per cent of U.S. investment to have been of this type.

	Share (per cent) of Direct Investment in Stock of U.S. Long-term Investment Abroad
1897	92.7
1908	65.0
1914	75.5

Source: Lewis (1938), p. 605.

The earliest examples of U.S. direct investment took place while the U.S. was still, on net balance, an importer of capital. They illustrate the key role of the export of technology, or other firm-specific assets, as contrasted to the pure export of capital, as is the case with portfolio investment.

U.S. direct investment abroad, in the sense of production abroad by subsidiaries or branches of U.S. companies, began soon after the Civil War and involved companies "... with national sales plans and unique products ..."

(Wilkins 1970, p. 35). Wilkins describes Singer, the manufacturer of sewing machines, as "... the first American international business ..." (p. 37), with salaried sales representatives abroad in the early 1860s and its first foreign factory by the late 1860s (p. 42). Other early American production abroad during the period when the U.S. was still a capital importer was by Hoe (printing presses), Babcock and Wilcox (boilers), International Bell Telephone and Western Electric, Edison Electric, Thomson-Houston Electric, a component of General Electric when it was formed later, Westinghouse Air Brake, Kodak, McCormick, Worthington Pump, Chicago Pneumatic Tool, Otis Elevator, National Cash Register, and Libbey-Owens (Southard, 1931; Wilkins, 1970). These companies were typically early technological leaders in their fields. Another indication of the importance of technology rather than capital is the number of instances in which the parent's investment consisted entirely or largely of patent-rights, as in the case of Ford in Canada, Libbey-Owens Glass in various European countries, and Westinghouse Electric in the U.K. (Lewis, 1938, pp. 300-301).

A rough indication of the importance of U.S. direct investment abroad in these years is that the stock of investment of 1897 was about 3/4 of 1 per cent of 1900 national wealth, and the investment stocks of 1908 and 1914 were about 1 per cent and 1 1/2 per cent, respectively, of 1912 national wealth (U.S. Bureau of the Census, 1975, Series F 422).

The Two World Wars and the Interwar Period

The growth of U.S. direct investment from the beginning of World War I through the end of World War II is summarized in the following figures:

	Stock of U.S. Direct Investment Abroad ($ million current prices)	
1950		11,800
1945		8,400
1940		7,300
1935	7,219	7,800
1931		8,100
1930		8,000
1929	7,553	
1927		6,600
1924	5,389	
1919	3,880	
1914	2,652[a]	[b]

[a]Lewis (1938), pp. 447, 450, and 605

[b]U.S. Bureau of the Census (1975), Series U29

In relation to U.S. national wealth, this foreign investment grew slightly until 1929, or possibly the early 1930s, to perhaps 1 3/4 per cent, but fell back to less than 1 1/2 per cent by the end of World War II and close to 1 per cent by 1950.

Since most of direct investment is corporate investment, it may be more revealing to compare its size to a measure of corporate wealth, such as total corporate assets, as we can do after the mid-1920s.

	Stock of U.S. Direct Investment Abroad as Percent of Total Corporate Assets
1950	2.0
1945	1.9
1940	1.8
1935	2.6
1930	2.4
1927	2.3

Source: U.S. Bureau of the Census (1975), Series U29 and V109

Thus, what appeared to be a trend toward increasing internationalization of U.S. companies up until 1929 or so was reversed by the Great Depression and World War II, and the late 1940s found U.S. direct investment abroad considerably smaller relative to total U.S. wealth and U.S. corporate assets than during the 1920s.

The late 1920s were exceptional in the history of U.S. direct investment in that investment in foreign public utilities, which represented only 4 per cent of the stock of direct investment in 1924, accounted for over a third of the increase during the next five years. In fact, almost the whole history of U.S. direct investment in foreign public utilities is concentrated in the few years between 1924 and 1929. The increase in the stock of public utility investment in these years was almost 80 per cent of the 1929 total as compared with less than 30 per cent for all industries combined (Lipsey, 1987).

Growth in Value of the Stock of U.S. Direct Investment, 1924 to 1929, as Per Cent of the 1929 Stock, by Industry

	1929 minus 1924 as Per Cent of 1929
Primary Production, excl. petroleum distrib.	19.9
Manufacturing	31.2
Public Utilities	78.2
Distribution incl. petroleum distrib.	18.1
Other	3.5
Total	28.7

Source: Lewis (1938), pp. 450 and 605.

The reasons for this concentrated burst of direct investment in utilities are worth noting. The two U.S. companies that were the ultimate parents of most of the utility affiliates were major manufacturers of the capital goods purchased by the utilities. Neither one operated utilities in the U.S. The ownership of foreign utilities was, in effect, a way of exploiting the parents' advantages in technology and marketing in the telephone and electric power equipment manufacturing industries.

The Growth of U.S. Direct Investment Abroad After World War II

Whatever technological leads over firms in other countries that U.S. firms possessed before World War II must have been greatly enlarged by the relatively favorable environment the U.S. companies enjoyed during and immediately after the war. It is therefore not surprising that after 1950, the growth of U.S. direct investment abroad, slowed by the Great Depression and World War II, resumed its rise and did so at a rapid pace. One measure of the spread of U.S. firms, the number of new affiliates established, rose rapidly from low levels immediately after the war to a peak in the late 1960s, and then slowed down.

	Number of New Foreign Affiliates Established per Year by U.S. Parent Firms	
	187 Parents	180 Parents
1975		376
1974		619
1973		693
1972		646
1971		905
1970		853
1969		945
1968		1,006
1967	503	912
1966	622	669
1965	714	
1964	714	
1963	696	
1962	596	
1960-61	612	
1958-59	414	
1956-57	316	
1954-55	249	
1951-53	193	
1946-50	107	

Source: Vaupel and Curhan (1969), p. 122; Curhan, Davidson, and Suri (1977), p. 19.

These data are confined to fixed groups of corporations that had become multinational by the time the sample was selected, and the decline in the rate of establishment could have represented nothing more than the exhaustion of profitable locations for new affiliates by these particular groups of parents. Furthermore, the data take no account of the size of the newly established affiliates or of their growth after establishment.

A measure of the internationalization of U.S. firms as a group is the ratio of foreign direct investment to domestic corporate assets. The value of foreign direct investment is measured as the book value of parent investment in affiliates as reported on the books of affiliates. In Table 1 we compare the value of direct investment in foreign countries with two estimates of the total assets of U.S. corporations. One of these is based on U.S. Department of Commerce calculations of the current value of fixed capital owned by corporations and the Federal Reserve Board's figures for financial assets of corporations, but omitting inventories. The second is a comprehensive asset measure from book values reported on tax returns. The second measure is probably inferior as an indicator of corporate wealth but may be more comparable to the book values reported in the foreign investment surveys.

The peak importance of direct investment abroad relative to all U.S. corporate assets--a little over 3 per cent--came somewhere between the mid-1960s and the mid-1970s. However, the year-to-year fluctuations and the weakness of the estimates for years in between surveys make it difficult to identify a precise peak. Whatever the date of the peak, there had apparently been little change by 1980. The level of internationalization at that point appeared to be close to the peak level. By the time of the 1982 survey, both measures showed a considerable decrease in internationalization, and that continued through 1985 before reversing in the next two years.

Foreign investment was always less important in finance than in other industries, and the ratio for all industries is greatly affected by the inclusion of financial corporations. Overseas investment was a much higher proportion of the assets of nonfinancial corporations than of those of financial corporations or all corporations, but the time pattern appears to have been similar. There was a peak at some point between 1966 and 1973, some decline through the 1970s, a very sharp drop during the first half of the 1980s to the levels of the 1950s, and then a couple of years in which the ratio increased again.

The amount of investment relative to assets is only one of several possible measures of the international activities of U.S. firms. It is the one that can be carried back the furthest, but it has several drawbacks. At best it measures the financial stake in overseas affilitates, but it does not reflect the level of activity carried on there. U.S. firms could be increasing the share of production they carry on abroad or the share of their employment abroad while reducing their investment in foreign affiliates and still retaining control of them. More serious problems of measurement arise from the fact that the investment in foreign affiliates is measured in book values rather than current values and that these are subject to the vagaries of currency translation. The tangible assets of all U.S. firms, in the denominator of the ratio, are estimated current values. The high inflation rates of the late 1970s and early 1980s must have raised the totals for U.S. firms' assets relative to the values on the books of affiliates. The rise in the value of the dollar from 1980 through 1984 must have had a similar effect. The rapidity of the decline in direct investment relative to corporate assets in the 1980s suggests the influence of the rise in the exchange value of the dollar.

A financial measure that comes closer to representing the size of U.S.-controlled overseas operations, rather than only the extent of U.S. investment in them, is the ratio of overseas assets to the domestic assets of corporations. It is available only for the survey years and confirms the results from the longer direct investment series that there was a peak, among survey years, in 1977, and a decline from that date to 1982.

	Assets of U.S.-Owned Affiliates as Per Cent of U.S. Corporate Assets			
	All Industries		Non-Financial Industries	
	U.S. Corporation Assets from			
	BEA & FRB	IRS	BEA & FRB	IRS
1986			15.7	
1985	NA	NA	14.9	NA
1984	NA	NA	14.4	NA
1983	NA	NA	15.5	12.2
1982	15.9	15.8	16.6	13.5
1977	16.9	15.6	20.3	16.8
1966	7.61	6.99	14.8	12.3
1957	5.25	4.84	9.57	8.91
1950	NA	NA	7.00	6.28

Source: Appendix Tables U-1 and U-3

However, there is a major difference in the pattern shown by this measure. The degree of internationalization as represented here did not recede to anything close to the level of the 1950s. For industries other than finance, the ratio in 1986 was more than twice that of 1950 and above those of 1983 and 1984. For all industries, the data are less complete, but the 1982 ratio of direct-investment assets to total corporate assets was still, in 1982, more than three times the 1957 ratio. The difference between the movement of the direct investment/corporate assets ratio and the direct investment assets/corporate assets ratio points to the fact that U.S. corporations were controlling foreign assets overseas with much lower levels of investment per dollar of assets in the 1980s than in the 1950s.

	Direct Investment Position as Per Cent of Affiliate assets	
	All Industries	Nonfinancial
1986		30.3
1985	NA	30.9
1984	NA	31.8
1983	NA	31.1
1982	15.4	30.3
1977	17.6	35.3
1966	40.2	46.0
1957	52.3	58.5
1950	NA	62.6

Source: Appendix Tables U-1 and U-2

The decline was largest for the all-industry total because the ratio of direct investment to assets is so low for the increasingly important finance sector, particularly banks. However, the phenomenon was present in the non-financial sector also, where the direct investment position fell from over 60 per cent to about 30 per cent of affiliate assets.

A measure free of the effects of inflation and exchange rate fluctuations is provided by data on employment.

Employment in Foreign Affiliates as Per Cent of
U.S. Private Sector Non-Agricultural Employment

	All Affiliates			Majority-Owned Affiliates		
	Total	Nonbank[a]	Non-Financial	Total	Nonbank	Non-Financial
1986		7.6	8.0		5.7	6.0
1985		7.9	8.4		5.9	6.3
1984		8.2	8.6		6.2	6.5
1983		8.6	9.1		6.5	6.9
1982	9.2	9.0	9.5	7.0[b]	6.8	7.2
1977	10.9	10.7	11.3	8.2[b]	8.0	8.4
1966	NA	NA	NA	7.3	7.2	7.6
1957	7.1	NA	7.3	NA	NA	NA

[a]Non-bank affiliate employment as per cent of total U.S. private sector non-agricultural employment

[b]Including minority-owned bank affiliates

Source: Appendix Tables U-1 and U-6

Relative to private non-agricultural employment in the U.S., employment in U.S. affiliates grew by more than half between 1957 and 1977, and the same was true for nonfinancial affiliate employment relative to employment outside of finance in the U.S. For majority-owned affiliates (the only ones for which figures are available for 1966), there was a relative increase between 1966 and 1977. Between 1977 and 1986, all measures of overseas employment declined relative to U.S. employment. The decline was a major one, almost 30 per cent for all non-bank and non-financial affiliates and more than 15 per cent even between 1982 and 1986.

The sector that has received most attention in the United States, manufacturing, underwent a much greater increase in the extent of internationalization in the 20 years ending in 1977 than did the rest of U.S. industry. Overseas employment reached a quarter of domestic employment, as compared with a little over 10 per cent for all industries. The relative decline was then much smaller in manufacturing, as can be seen below--a little over 10 per cent after 1977 and 7 to 9 per cent after 1982.

Employment in U.S. Manufacturing Affiliates Abroad as Per Cent of U.S. Domestic Manufacturing Employment

	Affiliates Classified by Industry of Affiliate		Industry of Parent
	All Affiliates	Majority-owned Affiliates	
1986	22.0	16.4	23.3
1985	22.6	16.6	24.4
1984	22.6	16.7	24.2
1983	22.9	17.4	25.0
1982	23.6	17.9	25.6
1977	24.7	19.2	NA
1966	NA	13.6	NA
1957	9.9	NA	NA

Source: Appendix Tables U-1 and U-6

The great increase in the degree of internationalization between 1957 and 1977 reflected the rise in the internationalization of the manufacturing sector, offset in part by the shift of U.S. employment away from this relatively internationalized sector. After 1977, the decline in internationalization in manufacturing was reinforced by a continued decline in the importance of manufacturing employment within the U.S.

Employment is not an ideal measure for comparing domestic and overseas labor input. For one thing, there was a shift toward female and part-time employment in the U.S. that may not have been matched overseas. If that was the case, the employment comparison overstates the relative fall in overseas labor input in direct investment operations as compared with the domestic U.S.

economy. Aside from the measurement problem, it is hard to know whether the relative drop in affiliate employment from 1977 to 1982 reflects mainly the effect of the 1982 recession or is part of a declining trend. The persistence of the decline through 1986 casts some doubt on the cyclical explanation.

One respect in which the degree of internationalization of U.S. manufacturing firms has continued to rise is that exports from overseas affiliates have increased relative to exports from the United States by the affiliates' parents and by the U.S. as a whole (Lipsey, Blomström and Kravis, 1989). This measure also has defects as an indicator of internationalization. It has the advantage that numerator and denominator are in current values, but it also reflects the changing degree of export orientation of affiliates, parents, and U.S. firms in general.

The level of employment in manufacturing affiliates, after declining relative to parent employment from 1977 to 1982 and 1983, rose in 1984, stayed unchanged in 1985, but fell again in 1986. Thus, there are some signs in the employment data that manufacturing firms have retreated somewhat from foreign operations.

While each of these measures of the internationalization of U.S. firms has serious defects, they are unanimous in indicating that U.S. companies expanded substantially into international production after 1950, to the point where employment overseas reached above 10 per cent of employment in the U.S. (in 1977) and assets of overseas affiliates reached over 15 per cent of corporate assets (in 1977 and 1982) and 20 per cent of assets outside of finance (in 1977). Since the peak levels were reached, there has been a retreat, in the sense that overseas employment and investment have declined relative to total employment and total corporate assets. How much pulling back there has been from foreign operations remains uncertain. The drastic decline back to 1950s levels implied by the ratios of investment position to domestic assets clearly exaggerates the extent of any withdrawal from production and employment overseas, because U.S. multinationals were, by the end of the period, carrying much more employment abroad and much higher assets per dollar of investment position than during the 1950s. It is fair to conclude that whatever force propelled U.S. firms into foreign production during those years seems to be much weakened.

Germany

For no other country do we have the same degree of information about direct foreign investment as for the U.S. Most countries rely for their data on cumulations over time of investment flows or permissions to invest or on voluntary or other incomplete surveys, often inconsistent in coverage and methods to a much greater degree than the U.S. surveys. Despite these deficiencies of the data, we can usually extract some indication from them of the direction and extent of internationalization.

The longest German series is for the stock of direct investment relative to total assets of enterprises (Table 2). It is subject to the severe limitations of investment stock measures mentioned above. From 1965 through 1984, it shows a quintupling of the importance of direct investment abroad, an increase that is uninterrupted in the years for which we have data, before slight declines in 1985 and 1986. For the period after 1976, through 1985 or 1986, we have confirmation of this rise in internationalization from two measures we consider more reliable than the stock of direct investment, the aggregate assets of foreign affiliates of German firms, which we compare with the total assets of German enterprises, and employment, which we compare with domestic employment in Germany. The asset data show a doubling and the employment data a rise of about 50 per cent in the degree of internationalization of German firms. The asset data show no year-to-year declines until 1985 and 1986, but the employment data show a decline relative to domestic employment from 1981 to 1983 and then an increase but with only the last of the ratios, for 1985 and 1986, exceeding that of 1981. Thus, there is some indication here of at least a slowing in the rate of increase of internationalization, but only small signs of a reversal such as took place in the United States. The contrast between the monetary and non-monetary measures during the 1980s may partly reflect the effects of the fall in the exchange value of the Deutsche Mark relative to the U.S. dollar, which would tend to raise the apparent degree of internationalization in terms of assets but not in terms of employment. The overall picture for Germany is of a rise in the degree of internationalization of firms that has not so far come to an end.

As far as we can tell from the period after 1976, the use of the direct investment position rather than total assets of affiliates does not seriously bias the German internationalization measure as it does that for the U.S. There was some decline in the ratio of the direct investment position to total assets of affiliates between 1976 and 1985 but it was a much smaller one than for U.S. affiliates, as can be seen below.

Germany

Direct Investment Position
as Per Cent of Affiliate Assets

1986	16.6
1985	16.5
1984	16.2
1983	16.0
1982	15.3
1981	15.4
1980	15.3
1979	15.6
1978	16.2
1977	17.4
1976	18.6

Source: Appendix Table G-1.

In other words, German parents do not seem to have moved extensively toward expanding the financing of affiliates from non-parent sources.

The United Kingdom

There has been a trend toward increasing internationalization of non-financial British companies, if we can believe the only measure available for the U.K., the ratio of direct investment to the total assets of some constantly changing universe of domestic firms (Table 3). The universe consists first of panels of listed companies, fixed in composition for five years at a time. Later it is the much larger universe of what are referred to as "large corporations" (see Appendix Table UK-4). The degree of internationalization changed little, if at all, in the early 1960s, after rising during the late 1950s, but then picked up speed, increasing by about 75 per cent from 1977 to 1984. Thus, the extent of internationalization grew rapidly in the 1980s, just when the growth of internationalization appears to have stopped in the U.S. Furthermore, there were very few cases, within the fragments of comparable data, in which the upward trend in U.K. internationalization was reversed for more than a year.

The contrast between the trend in the U.K. and that in the U.S. in the early 1980s must be at least partly produced by exchange rate changes. The rise in the exchange value of the dollar after 1980 reduced the value of the U.S. investment in Great Britain and increased the value of British investment in the U.S. Both countries were major hosts to each others' firms.

This is another case, then, of a clear upward trend in internationalization. In contrast to the German case, this one took place in a country that was losing ground in international trade. Thus, it may be an example of internationalization driven more by unfavorable conditions for production in the home market than by the exceptional competitiveness of the country's multinational firms.

Japan

Particular interest attaches to the progress of internationalization of Japanese firms because they have been so successful in international markets exporting from their home base. They have had, therefore, until recently, less incentive to move production abroad than firms that were struggling against the lack of competitiveness of their home countries. Unfortunately, the data on the overseas operations of Japanese firms are sketchy, depending heavily on either the cumulation of approvals for foreign investment or on surveys that are seriously incomplete in coverage and inconsistently incomplete over time. We suspect that the data on approvals suffer from worse disadvantages than those from the surveys, and for that reason we have not used them here, although they are often quoted. One problem is that there is no clear connection between amounts approved and amounts actually invested. The published data on approvals in Bank of Japan (1987) are in U.S. dollars, and it is not obvious what exchange rates should be used to convert them to Japanese currency. Furthermore, they take no account of reinvested earnings of Japanese companies operating abroad. The survey data, which we do use, apparently cover 51 per cent or less of the universe in terms of numbers of parent companies and a widely fluctuating, but considerably larger, percent according to the only quantitative measure we have: the ratio of the book value of outstanding equity of companies that answered the survey to the value of equity investment of all companies with approved foreign investment, as reported by the Ministry of Finance.

Despite all the defects of the Japanese data, there is little doubt that there was a move toward increased internationalization during most of the 1970s, particularly within the corporate sector (Table 4). All the measures showed some slowing or even reversal of that trend during the late 1970s. However, the reversals could easily have been an artifact created by the volatility of exchange rates in the case of the financial data and by fluctuations in the extent of coverage and our crude adjustments for them in the case of the employment data. During the 1980s, the trend toward increasing internationalization was resumed, at least in the share of assets held overseas in the form of direct investment. The increases in internationalization in the last few years are less convincing than the earlier ones for two reasons. One reason is that the ratio of foreign to domestic employment hardly changed between 1981 and 1984 and was in any case not much greater than the ratios of 1976 and 1977. The second reason is that while the ratio of direct investment to corporate assets and national wealth did rise rapidly from 1980 to 1985, some part of that increase must have reflected the fall in the exchange value of the yen relative to the U.S. dollar during those years.

On the whole, over the whole period, there is a clear tendency toward internationalization of Japanese corporations. The shift may have slowed for several years, but it seems likely, and there is much anecdotal evidence in that direction, that the rise in the exchange value of the Yen in 1986 and 1987 has given the trend new life, even while it has probably decreased the nominal value of existing Japanese direct investment.

The Netherlands

Although the Netherlands has been active in direct investment abroad for a long period, we have been able to make some calculations of internationalization for only eight years, partly for lack of a good denominator against which to compare the level of investment. We do have a comparison between the direct investment position of the Netherlands and the aggregate assets of corporations quoted on the Amsterdam Stock Exchange, a limited group with steadily decreasing numbers. For what it is worth, the results agree with those of most other countries in showing an increase in the ratio:

	Netherlands Direct Investment Position as Per Cent of Assets of Corporations Quoted on the Amsterdam Stock Exchange
1983	43.3
1982	40.7
1981	40.6
1980	39.4
1979	36.3
1978	35.9
1977	35.9
1976	34.0

Source: Appendix Table N-1

The increase was not very large, but it was continuous. It is not clear whether the decline in the number of firms in the denominator produces a bias in the ratios. If firms were leaving the stock exchange, there would be an upward bias in the ratios; if they were disappearing by merger with other stock exchange firms, there would not be such a bias.

Canada

Canada is known much more as a recipient of direct investment than as a source, but it too has major investors among its firms. For Canada, as for most of the countries, we have data for a substantial period only for the direct investment position. When we compare that with the total assets of Canadian corporations, we find that the latest ratio is substantially above the earliest, although there is no clear trend (Table 5). The importance of direct investment, by this measure, fell from a peak in 1970 to a low point in 1976 and then increased about 50 per cent by 1985. It did end up considerably higher than it was twenty years earlier.

The pattern of changes does suggest some exchange rate influences. It showed a substantial decline in the direct investment share from 1969 and 1970 through 1976, while the price of the Canadian dollar was rising relatively, at least until 1974. Then there was a large rise through 1985, while the price of the U.S. dollar increased by about a third.

Korea

Korea, the only developing country in our sample, has very little direct investment abroad, as we might expect (Table 6). However, in the very brief period for which we have data, the degree of internationalization more than doubled. The increase was considerably more than could be explained by exchange rate movements and presumably reflects a trend toward more overseas production by Korean firms.

Table 6

Value of Korean Direct Investment Abroad
as Per Cent of Assets of Korean Corporations

1985	0.71
1984	0.73
1983	0.64
1982	0.51
1981	0.34
1980	0.33

Source: Appendix Tables K-1 and K-2

Across the seven countries for which we have found some data, there seems to have been a fairly general movement toward increasing internationalization. There are several indicators of this trend. One is the growth of their foreign direct investment positions relative to the domestic assets of their corporations. A second is the increase in the proportion of assets their firms control that is located outside the home countries. And a third is the rise in the proportion of employment that their firms control that is outside the home countries.

The exception to these generalizations is the United States. After a rapid growth in the degree of internationalization until the 1970s, U.S. firms appear to have drawn back somewhat and reduced their overseas employment and assets relative to those in the U.S. The extent of any such retreat is greatly exaggerated by the figures for the direct investment position of the U.S. but some reduction in foreign relative to domestic activity is indicated by the more reliable measures.

What can explain the divergent trends in the U.S. and other countries? One possibility is that the period of World War II and the reconstruction afterward had opened up a wide gap between U.S. firms and those in other countries. U.S. firms came out of that period with an accumulation of the technological and organizational assets that are the basis for a firm's ability to operate in foreign countries. That gap between U.S. and foreign firms increased the level of foreign operations and the share of foreign operations in their total activity that were optimum for the U.S. firms. They expanded rapidly to bring their foreign operations up to this level but, having reached it, slowed down or halted the expansion.

The optimum level of the share of foreign operations in the total may also have changed over time. If the low technological level of foreign competitors was a reason for the profitability of foreign operations, the recovery of foreign firms, even if not fully up to the level, of the U.S. firms, could at some point have reduced the attraction of foreign production for U.S. firms. At the same time, it would have raised the optimum level of internationalization for the foreign firms from the postwar low point, and they would, in turn, move into production outside their home bases. To examine such an explanation of changes in internationalization we would need observations on levels of internationalization, comparable among countries, as well as the record of trends.

Recent Levels of Internationalization

Unfortunately, the continuous series we have used to judge trends are very different in character from country to country. We need some common measure of country size, even a crude one, against which to compare levels of internationalization.

One candidate for a country size measure is national wealth, the sum of tangible assets and net foreign assets. This is a total without duplication, in which financial assets owned internally are netted out against financial liabilities owed to local creditors, and in which holdings of foreign assets are netted out against foreign liabilities. Another candidate is national assets, the sum of all tangible and financial assets, domestic and foreign. It has the drawback of reflecting the extent of financial intermediation or layering in the economy but may be thought of as more comparable to the numerator, since the direct investment asset total in the numerator is gross rather than net, in the sense that direct investment liabilities and other foreign liabilities are not netted out against assets as they are in national wealth. For both of these measures we have Raymond Goldsmith's calculations on as comparable a basis as possible, including years close to 1977. Of the seven countries discussed here, five are in Goldsmith's compilation.

	Stock of Direct Investment	National Assets	National Wealth	Stock of Direct Investment as Per Cent of National Assets	Stock of Direct Investment as Per Cent of National Wealth
U.S. (1978) $ billion	146.0	17,887	9,104	.82	1.60
Japan (1977) Y trillion	2.88	1,792	894.2	.16	.32
U.K. (1977) £ billion	20.1	1,327.6	617.3	1.51	3.26
Germany (1977) DM billion	51.6	10,172	5,534	.51	.93
Canada (1978) $ C billion	16.4	2,185	970	.75	1.69

Source: Appendix Tables U-2, Col. 3, G-1, Col. 1, UK-1, Col. 1, J-1, Col. 5. C-1, and Goldsmith (1985), Appendix A, Sum of tangible assets, Monetary metals, and Net foreign assets.

At this point, close to the peak of the internationalization of U.S. firms, the shares of direct investment in German and Japanese national wealth and national assets were only about 60 and 20 per cent respectively of those in the United States. The Canadian ratios were close to the U.S. levels and the UK ratios were about twice as high.

For a more recent year, the value of direct investment abroad can be compared to the stock of domestic plant and equipment for five countries as follows:

	Value of Direct Investment Abroad as Per Cent of Value of Domestic Net Stock of Plant and Equipment 1985
United States	3.2
U.K.	7.4
Germany	2.7
Japan	1.3
Canada	5.5

Source: OECD (1987), Bank of Japan (1988), and Appendix Tables U-2, G-1, UK-1, J-1, and C-1

The ordering of the countries is almost the same, but all these ratios are higher relative to those of the U.S. than the ratios of direct investment to national wealth and national assets in 1977-78. The difference reflects at least partly the increases in internationalization in countries other than the U.S. There is also a difference in the measure used.

Of the few countries that collect data on the overseas employment of their multinationals, the United States has the highest ratio to domestic employment.

	Employment in Foreign Affiliates as Per Cent of Domestic Employment 1982
United States	9.2
Germany	7.1
Japan	2.1

Source: Appendix Tables U-1, U-6, G-1, G-2, and J-2.

At least this input into production in foreign countries is much more important relative to home input for the U.S. and Germany than for Japan, and somewhat more important for the U.S. than for Germany. Since the ratio of capital to labor input varies widely among industries, we cannot conclude that production abroad bears the same relation to production at home as the employment abroad does to employment at home. For two countries, however, we can supplement that calculation by a rough measure of capital stocks held overseas relative to domestic fixed assets.

	Assets of Foreign Affiliates as Per Cent of Value of Domestic Net Stock of Plant and Equipment, 1982
United States	21.6
Germany	14.9

Source: Tables U-1, G-1, and OECD (1987)

The capital input measure and the labor input measure both show the U.S. to have internationalized the production it controls to a larger degree than Germany has. The margins were 30 per cent for employment and 45 per cent for capital, both considerably greater than the 19 per cent difference for the value of direct investment. These comparisons suggest that the direct investment comparisons can be very inaccurate as measures of the amount of both labor and capital input in controlled operations overseas, that they tend to greatly understate the extent of such operations, and that the understatement is larger for the U.S. than for Germany.

We are fairly sure from these data that U.S.-owned production is more internationalized than that of Germany, and that both of these countries have moved much further in this direction than Japan. The relatively low levels of internationalization of German and Japanese production, especially the latter, may still reflect to some extent the loss of overseas assets by both countries as a result of World War II. It may also reflect the fact that both countries, and especially Japan, have been highly competitive in world markets. Consequently, there was not until recently a strong force pushing German and Japanese firms to produce overseas to expand or preserve their markets. The rise in the value of both countries' currencies relative to the dollar may provide such a push, but any movement of real production will initially be obscured by the fact that the value of existing foreign assets, relative to domestic assets, is reduced by upward currency revaluations.

Lacking data on capital and labor input, we are uncertain as to whether the high ratios of direct investment to domestic capital in the U.K. and Canada represent high degrees of internationalization of their production.

The high ratio for the U.K., if we accept it at face value, suggests that there must be explanations other than the competitiveness of a country's firms, since U.K. firms are not usually thought of as being the world's technological or organizational leaders. The high level and continued growth of the ratio for the UK suggest the effects of home-country conditions: the low competitiveness and deterioration of the U.K. as a site for production. Under these circumstances a UK firm possessing firm-specific advantages that can be used in production abroad may be much more tempted to go abroad than a Japanese firm with similar firm-specific advantages. The reason is that the Japanese firm has a home base that, at least until very recently, was a favorable location for production. Thus the UK case points to the home-country factors pushing firms out into the world as well as to the host-country or firm attributes pulling them out.

A difficulty in interpreting the levels of internationalization is that we have no definition of the optimum level and no theory to explain it. It is not clear that even with the same firm and country competitive advantages two countries' firms would reach equal levels of foreign production. It could be that the smaller the country, the higher the degree of internationalization it would reach, other things equal. A firm with a technological or other firm-specific asset might have to go abroad at a much smaller size to exploit it if it is based in a small country than if it is based in a large country, as illustrated by Swedenborg's comparison of the size at which U.S. and Swedish firms began producing outside their home countries (Swedenborg, 1979).

An additional factor in the trends in internationalization that we have not had time to explore is changes in the industrial composition of output and employment. In the U.S. case, the apparent decrease in internationalization partly reflects the rapid growth of the service industries which, up to now, have been less international in their operations than manufacturing industries, although their level of international activity has been increasing.

The interpretation of all of the monetary measures is affected by the two offsetting consequences of exchange rate changes. A rise in the exchange value of a home currency has a statistical effect on the measured level of internationalization by reducing the value in home currency of foreign asset holdings, and a home currency depreciation has the opposite effect. However, the same rise in exchange value that reduces the measured level of internationalization, if it is a change in real exchange rates, encourages internationalization by reducing the real cost of foreign assets. The timing is probably different: the statistical effect is immediate while the economic effect must take several years since it involves building production facilities or buying or selling them. Thus, the large rise in the exchange value of the U.S. dollar from 1980 through early 1985 must have depressed the nominal measures of U.S. internationalization even while it encouraged U.S. firms to shift production overseas. The latter effect must have come with considerable delay, however, and figures for the early 1980s were probably dominated by the statistical effects of dollar appreciation and the real effects of the low exchange value of the dollar around 1980.

Summary

Our tentative explanation for the level of and trends in internationalization in these countries is that country size and changes in both the competitive advantages of firms and the competitiveness of home countries played a role. The overseas expansion of U.S. firms in the 1950s and 1960s reflected mainly their competitiveness, particularly the technological and organizational gaps that had opened up between U.S. firms and those based in other countries. The expansion may have been pushed by the growth of markets outside the United States relative to the U.S. market until the early 1970s, and also by the increasing overvaluation of the dollar. The combination of events may have caused the degree of U.S. internationalization to reach a level that was above the optimum for such a large country.

Eventually, the rise in the competitiveness of European and Japanese companies relative to their U.S. rivals both decreased the attraction of foreign production for the U.S. companies and increased it for foreign companies. At the same time, the movement of the exchange value of the dollar to its low point around 1980, and again after 1985, encouraged production in the U.S. by U.S.-based firms (reducing their internationalization levels) and by foreign-owned firms (increasing their internationalization). The same result was favored by the improvement in the relative growth rate of the U.S. beginning in the early 1980s. And in the 1980s, the nominal ratios were affected by the statistical effects mentioned above.

The internationalization ratios for Germany and Japan are so much lower than that of the U.S., despite their smaller market sizes, that one might expect continued moves toward internationalization by those countries' firms. The case for an increase is even stronger for some developing countries, to judge by the only example we have, Korea, which appears to be roughly where

Japan was in this respect in the early 1970s. The relatively high ratio for Canada probably reflects mainly the small size of its domestic market, especially by comparison with the U.S., and the extremely high ratio for the U.K. may be a consequence of the long period of both low growth and low competitiveness of the domestic economy.

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Appendix Table U-1

United States

Measures of U.S. Firms' Foreign Activity

	All Industries		All Industries except Banking		All Nonfinancial		Manufacturing Number of Employees (000)	
	Total Assets ($ mill.)	No. of Employees (000)	Total Assets ($ mill.)	No. of Employees (000)	Total Assets ($ mill.)	No. of Employees (000)	By Industry of Affiliate	By Industry of Parent
	ALL AFFILIATES							
1986			932,225	6,262.7	693,965	6,114.8	4,175.1	4,419.2
1985			834,636	6,419.3	627,513	6,279.5	4,348.7	4,691.6
1984			759,994	6,417.5	574,087	6,295.5	4,370.0	4,689.4
1983			750,823	6,383.1	577,313	6,256.0	4,229.6	4,610.8
1982	1,348,494	6,816.0	751,486[a]	6,640.2[a]	591,960	6,527.2	4,432.9	4,814.3
1977	829,617	7,342.0	490,178[b]	7,196.7[b]	414,026	7,110.3	4,855.1	NA
1966	128,939	NA	114,256	NA	102,667	NA	NA	NA
1957	48,256	3,200	NA	NA	41,692	3,140	1,700	NA
1950	NA	NA	NA	NA	18,830	NA	NA	NA
	MAJORITY-OWNED AFFILIATES							
1986				4,722.9		4,621.1	3,104.4	
1985				4,810.4		4,715.5	3,201.8	
1984				4,841.7		4,751.9	3,245.2	
1983				4,853.6		4,758.4	3,200.8	
1982		5,181.4		5,022.4		4,932.3	3,357.6	
1977		5,503.8		5,368.8		5,306.3	3,773.3	
1966		3,874		3,874		3,808	2,615	

Notes to Appendix Table U-1

Sources:

Whichard (1988)
Brereton (1987) and (1986)
U.S. Dept. of Commerce (1986), Tables 11 and 46
U.S. Dept. of Commerce (1985a), Table 6, pp. 13 & 14, Table III.F4
U.S. Dept. of Commerce (1981), Table C, pp. 10-11, Table III.G-2
U.S. Dept. of Commerce (1975), Table I-21, p. 149, Table K-3, p. 192
U.S. Dept. of Commerce (1960), Tables 17, p. 105, 19, p. 107, and 35, p. 123

[a] By industry of parent, comparable to 1983-86. By industry of affiliate, from U.S. Dept. of Commerce (1985a), $774,773 million assets and 6,657,000 employees.

[b] By industry of parent, comparable to 1982-86. By industry of affiliate, from U.S. Dept. of Commerce (1981), $494,611 million assets and 7,207,100 employees.

Appendix Table U-2

United States

Measures of Direct Investment Position, 1950-1987
($ million)

	All Industries			
	Total	Excl. Finance Affil. in Neth. Antilles	Excl. Finance Affil. in Neth. Antilles and Holding Cos.	Non-financial Industries
	(1)	(2)	(3)	(4)
		Based on 1982 Survey[a]		
1987	308,793	322,293	290,575	244,342
1986	259,562	275,640	247,928	210,573
1985	229,748	250,722	227,947	193,650
1984	211,480	236,520	215,746	182,406
1983	207,203	230,503	210,837	179,741
1982	207,752	227,841	208,244	179,417
		Based on 1977 Survey[b]		
1982	221,843	238,309		192,742
1981	228,348	236,081		191,503
1980	215,375	220,177		180,115
1979	187,858	190,522		156,335
1978	162,727	164,116		138,686
1977	145,990	147,206	135,729	120,372
		Based on 1966 Survey[c]		
1977	149,848			129,521
1976	136,809			120,016
1975	124,050			109,431
1974	110,078			97,447
1973	101,313			91,587
1972	89,878			81,709
1971	82,760			74,976
1970	75,480			68,290
1969	68,093			61,762
1968	61,907			56,520
1967	56,560			51,696
1966	51,792		49,481	47,252

(continued)

Appendix Table U-2 (concluded)

	All Industries			
	Total	Excl. Finance Affil. in Neth. Antilles	Excl. Finance Affil. in Neth. Antilles and Holding Cos.	Non-financial Industries
	(1)	(2)	(3)	(4)
	Based on 1957 Survey[d]			
1966	54,799			
1965	49,474			
1964	44,480			
1963	40,736			
1962	37,276			
1961	34,717			
1960	31,865			
1959	29,827			
1958	27,409			
1957	25,394 25,262[e]		25,151[e]	24,393[e]
	Based on 1950 Survey[d]			
1957	26,278			
1956	22,505			
1955	19,395			
1954	17,631			
1953	16,253			
1952	14,721			
1951	12,979			
1950	11,788			11,363[e]

Sources: [a]Scholl (1988) and (1987), and U.S. Dept. of Commerce (1986).

[b]U.S. Dept. of Commerce (1985c) and 1981), and Whichard (1983), (1982), (1981), and (1980).

[c]U.S. Dept. of Commerce (1982) and (1975) and Whichard (1979) and (1981).

[d]U.S. Dept. of Commerce (1982), except as noted.

[e]U.S. Dept. of Commerce (1960), Table 21.

Appendix Table U-3

United States

Total Assets of Corporations, 1950-1987
($ Billion)

	All Corporations		Non-Financial Corporations	
	BEA and FRB	IRS	BEA and FRB	IRS
1987	13,745.2		4,652.3	
1986	12,853.6		4,430.1	
1985	11,532.0		4,197.4	
1984	10,409.1		3,989.4	
1983	9,410.0	10,201.1	3,733.9	4,713.9
1982	8,646.3	9,357.8	3,563.4	4,370.3
1981	8,021.2	8,547.2	3,407.7	4,061.0
1980	7,218.3	7,617.2	3,059.0	3,595.0
1979	6,405.0	6,844.9	2,677.4	3,218.0
1978	5,657.3	6,014.4	2,351.7	2,765.0
1977	4,926.2	5,326.4	2,037.3	2,464.9
1976	4,435.9	4,720.9	1,844.6	2,171.1
1975	4,009.8	4,286.6	1,688.9	1,964.6
1974	3,609.5	4,016.5	1,529.4	1,839.8
1973	3,303.6	3,648.9	1,344.2	1,637.0
1972	2,985.8	3,256.8	1,187.5	1,446.6
1971	2,645.4	2,889.2	1,082.8	1,316.6
1970	2,372.7	2,634.7	989.0	1,233.6
1969	2,192.8	2,445.6	913.1	1,147.5
1968	2,047.7	2,215.6	828.4	1,012.7
1967	1,854.8	2,010.4	748.6	913.1
1966	1,696.7	1,844.8	694.8	837.1
1965	1,592.7	1,723.5	641.8	767.6
1964	1,459.3	1,585.6	591.9	701.7
1963	1,348.0	1,481.2	567.2	655.8
1962	1,253.7	1,388.1	539.2	623.3
1961	1,180.8	1,289.5	515.7	589.6
1960	1,099.7	1,206.7	494.9	556.1
1959	1,049.2	1,136.7	483.5	529.8
1958	987.1	1,064.5	456.2	492.0
1957	919.5	996.4	435.6	467.9
1956	870.5	949.0	411.0	444.4
1955	811.6	888.6	378.3	413.8
1954	740.7	805.3	341.4	372.8
1953	693.2	761.9	326.4	359.9
1952	656.2	721.9	312.1	347.0
1951	611.6	647.5	294.6	330.5
1950	565.2	598.4	269.0	299.7

Notes to Appendix Table U-3

BEA and FRB data are from Appendix Tables U-4 and U-5.

IRS data are from U.S. Treasury Department (1961), (1972), (1977a), (1977b), (1978), (1980), (1983), (1985) and (1987), and from U.S. Bureau of the Census (1985) and earlier issues.

Appendix Table U-4

United States
Current Dollar Net Stocks of Fixed Capital, 1950-1987
($ Billion)

	Corporate			Corporate Non-Financial	
	Total (1)	Non-Residential (2)	Residential (3)	Total (4)	Non-Residential (5)
1987	3,206.2	3,155.8	50.4	2,994.5	2,944.1
1986	3,054.9	3,007.2	47.7	2,868.5	2,820.8
1985	2,927.4	2,880.9	46.5	2,766.5	2,720.0
1984	2,805.4	2,760.5	44.9	2,659.8	2,614.9
1983	2,655.6	2,612.7	42.9	2,527.0	2,484.1
1982	2,584.4	2,543.2	41.2	2,462.9	2,421.7
1981	2,446.3	2,404.3	42.0	2,333.6	2,291.6
1980	2,162.5	2,123.0	39.5	2,418.6	2,023.6
1979	1,890.3	1,853.6	36.7	1,803.9	1,767.2
1978	1,681.1	1,647.6	33.5	1,604.5	1,571.0
1977	1,459.0	1,428.7	30.3	1,394.9	1,364.6
1976	1,315.7	1,288.1	27.6	1,259.3	1,231.7
1975	1,206.3	1,180.5	25.8	1,156.2	1,130.4
1974	1,081.8	1,056.9	24.9	1,036.8	1,011.9
1973	876.2	853.2	23.0	840.4	817.4
1972	783.3	762.0	21.3	752.6	731.3
1971	723.9	703.7	20.2	696.3	676.1
1970	660.3	642.8	17.5	636.2	618.7
1969	598.6	582.7	15.9	577.2	561.3
1968	540.8	527.1	13.7	522.0	508.3
1967	487.1	475.4	11.7	471.1	459.4
1966	447.2	436.3	10.9	433.0	422.1
1965	404.9	395.1	9.8	392.5	382.7
1964	374.5	365.5	9.0	363.6	354.6
1963	354.7	346.7	8.0	345.0	337.0
1962	341.5	334.1	7.4	332.6	325.2
1961	329.2	322.4	6.8	321.1	314.3
1960	320.8	314.5	6.3	313.2	306.9
1959	312.0	305.9	6.1	304.8	298.7
1958	299.3	293.6	5.7	292.7	287.0
1957	290.0	284.5	5.5	283.7	278.2
1956	269.7	264.2	5.5	263.8	258.3
1955	241.3	235.9	5.4	236.2	230.8
1954	221.2	216.0	5.2	216.8	211.6
1953	211.4	206.3	5.1	207.3	202.2
1952	206.1	195.0	5.1	196.1	191.0
1951	187.9	182.9	5.0	184.1	179.1
1950	170.0	165.3	4.7	166.6	161.9

Sources: Columns 2, 3 and 5: 1984-87, Musgrave (1988);
1950-83, Musgrave (1986a);
Col. 1: Col. 2 + Col. 3. Col. 4: Col. 3 + Col. 5.

Appendix Table U-5

United States
Total Financial Assets, 1950-1987
($ Billion)

	Total Corporate (1)	Nonfinancial Corporate Business (2)	Comm. Banking (3)	Private Nonbank Financial Inst. (4)
1987	10,539.0	1,708.2	2,743.4	6,087.4
1986	9,798.7	1,609.3	2,597.7	5,591.7
1985	8,604.6	1,474.7	2,344.6	4,785.3
1984	7,603.7	1,374.5	2,105.8	4,123.4
1983	6,754.4	1,249.8	1,874.4	3,630.2
1982	6,061.9	1,141.7	1,724.3	3,195.9
1981	5,574.9	1,116.1	1,613.4	2,845.4
1980	5,055.8	1,015.4	1,481.9	2,558.5
1979	4,514.7	910.2	1,355.9	2,248.6
1978	3,976.2	780.7	1,221.0	1,974.5
1977	3,467.2	672.7	1,068.7	1,725.8
1976	3,120.2	612.9	961.3	1,546.0
1975	2,803.5	558.5	885.9	1,359.1
1974	2,527.7	517.5	836.4	1,173.8
1973	2,427.4	526.8	761.3	1,139.3
1972	2,202.5	456.2	663.5	1,082.8
1971	1,921.5	406.7	578.6	936.2
1970	1,712.4	370.3	517.5	824.6
1969	1,594.2	351.8	471.6	770.8
1968	1,506.9	320.1	448.1	738.7
1967	1,367.7	289.2	403.5	675.0
1966	1,249.4	272.7	363.1	613.6
1965	1,187.8	259.1	341.8	586.9
1964	1,084.8	237.3	311.5	536.0
1963	993.3	222.2	285.4	485.7
1962	912.2	206.6	267.5	438.1
1961	851.6	194.6	246.0	411.0
1960	778.9	181.7	228.3	368.9
1959	737.2	178.7	218.6	339.9
1958	687.8	163.5	214.2	310.1
1957	629.5	151.9	199.1	278.5
1956	600.8	147.2	193.4	260.2
1955	570.3	142.1	187.4	240.8
1954	519.5	124.6	182.2	212.7
1953	481.8	119.1	172.6	190.1
1952	456.1	116.0	168.4	171.7
1951	423.7	110.5	159.0	154.2
1950	395.2	102.4	149.6	143.2

Source: Federal Reserve Board (1988), (1986), (1983), (1981), and (1979).

Col. 1 is the sum of columns 2, 3, and 4.

Appendix Table U-6

United States

Employees on Payrolls
Private Non-agricultural Establishments

	Total	Excluding Finance, Ins. and Real Estate	Manufacturing
1987	85,295	78,746	19,065
1986	82,832	76,549	18,965
1985	81,125	75,170	19,260
1984	78,472	72,783	19,378
1983	74,330	68,862	18,434
1982	73,729	68,388	18,781
1981	75,126	69,828	20,170
1980	74,166	69,006	20,285
1979	73,876	68,901	21,040
1978	71,026	66,302	20,505
1977	67,344	62,877	19,682
1976	64,511	60,240	18,997
1975	62,259	58,094	18,323
1974	64,095	59,947	20,077
1973	63,058	59,012	20,154
1972	60,341	56,433	19,151
1971	58,331	54,559	18,623
1970	58,325	54,680	19,367
1969	58,189	54,677	20,167
1968	56,058	52,721	19,781
1967	54,413	51,228	19,447
1966	53,116	50,058	19,214
1965	50,689	47,712	18,062
1964	48,686	45,775	17,274
1963	47,729	44,599	16,995
1962	46,660	43,905	16,853
1961	45,404	42,716	16,326
1960	45,836	43,207	16,796
1959	45,186	42,637	16,675
1958	43,483	41,002	15,945
1957	45,239	42,801	17,174
1956	45,091	42,702	17,243
1955	43,727	41,429	16,882
1954	42,238	40,038	16,314
1953	43,556	41,445	17,549
1952	42,185	40,150	16,632
1951	41,430	39,474	16,393
1950	39,170	37,282	15,241

Source: U.S. Dept. of Commerce (1980), (1985b); (1987), p. S-10, and (1988), p. S-10.

Appendix Table G-1

Germany

Measures of Direct Investment Abroad

	Total Direct Investment (Million DM)			Assets (Billion DM)			Turnover (Billion DM)	Employment (000)	No. of Enterprises
				Without Credit Institutions	Of Credit Institutions	Total			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1986	149,380			449.8	450.2	900.0	513.2	1,788	15,316
1985	147,453			459.4	431.6	891.1	564.0	1,789	15,132
1984	145,605			453.0	444.8	897.8	522.9	1,697	14,657
1983	123,497			387.5	385.0	772.5	436.1	1,617	14,044
1982	109,234			353.5	360.6	714.2	419.4	1,690	13,618
1981	101,918			337.5	325.8	663.3	400.5	1,762	13,084
1980	84,485			281.5	270.4	551.9	325.3	1,743	12,256
1979	70,330			235.5	214.0	449.5	275.3	1,651	11,180
1978	60,767			202.0	173.2	375.2	221.6	1,473	10,336
1977	51,570			167.9	128.4	296.3	189.4	1,248	9,351
1976	48,337			153.9	105.6	259.5	173.0	1,197	8,979
1975		41,992							
1974									
1973									
1972									
1971									
1970									
1969		17,618							
1968			14,349						
1967			12,056						
1966			9,996						
1965			8,317						
1964			7,205						
1963			6,071						
1962			4,956						
1961			3,842						

Sources: 1985-1986: Statistische Beihefte zu den Monatsberichten der Deutschen Bundesbank, Reihe 3: Nr. 3, March 1988.
1979-1984: Statistische Beihefte zu den Monatsberichten der Deutschen Bundesbank, Reihe 3: Nr. 3, March 1987.
1978: Statistische Beihefte zu den Monatsberichten der Deutschen Bundesbank, Nr. 2, February 1986.
1976-77: Monatsberichte der Deutschen Bundesbank, 32, No. 4, April 1980.
1969 and 1975: Kiera (1976).
1961-68: Al-Ani (1969).

Appendix Table G-2

Germany
Employment in Germany
(Thousands)

	Total Non-Agric. Employment		Civilian Non-Agric. Employment
	(1)	(2)	(3)
1987	24,113		
1986	23,923	23,912	
1985	23,650	23,644	
1984	23,463	23,459	
1983	23,402	23,402	
1982	23,782	23,782	
1981	24,161	24,202	
1980	24,335	24,360	23,747
1979		24,035	23,483
1978		23,633	23,092
1977		23,425	22,855
1976		23,377	22,813
1975			22,975
1974			23,805
1973			24,247
1972			24,087
1971			24,049
1970			23,907
1969			23,476
1968			22,968
1967			22,823
1966			23,530
1965			23,542
1964			23,295

Col. 1: United Nations, Monthly Bulletin of Statistics, June 1987, p. 12, for year 1980 and August 1988, p. 12 for year 1981-87.

Col. 2: International Labor Organization, Yearbook of Labor Statistics, 1986, and 1987, p. 357.

Col. 3: International Labor Organization, Yearbook of Labor Statistics, 1981, 1980, and 1974, p. 286.

Appendix Table G-3
Germany
Enterprise Assets
(Billion DM)

	All Enterprises (1)	Non-financial Enterprises Total Assets (2)	Non-financial Enterprises Fixed Assets (3)	Financial Enterprises (4)
1986	2,182.5			
1985	2,134.7	1,113.3	672.0	933.9
1984	2,063.6	1,085.6	654.7	897.1
1983	1,949.1	1,044.0	631.2	830.3
1982	1,863.4	1,017.8	603.5	773.7
1981	1,834.5	1,003.7	589.1	766.6
1980[a]	1,744.05	963.20	564.22	728.08
1980[b]	1,685.44	934.92	557.17	708.99
1979	1,582.88	873.75	532.30	672.10
1978	1,466.05	818.55	509.70	612.36
1977	1,381.25	786.36	496.34	560.87
1976	1,330.11	755.02	478.60	544.63
1975	1,222.27	697.25	447.52	494.59
1974	1,186.13	682.29	432.89	477.47
1973	1,134.53	651.01	427.44	461.31
1972	1,056.43	604.35	402.61	431.88
1971	962.38	562.19	371.43	382.62
1970	868.46	507.89	330.32	344.17
1969	773.91	452.44	297.11	306.42
1968	677.72	404.72	272.10	259.32
1967	619.82	386.96	262.56	220.12
1966	619.13	390.77	258.98	214.91
1965	583.72	366.27	239.58	204.64

[a]The first figures for 1980 and those from 1981-1986 were originally published in Systematik der Wirtschaftszweige des Statistischen Bundesamtes, Ausgabe 1979.

[b]The second figures for 1980 and those from 1965-1979 were originally published in Systematik der Wirtschaftszweige des Statistischen Bundesamtes, Ausgabe 1961.

Sources: Monthly Report of the Deutsche Bundesbank, Nov. 1987, p. 20. Monatsberichte der Deutschen Bundesbank, Nov. 1986, p. 20; Nov. 1985, p. 22; Nov. 1984, p. 20; Nov. 1983, p. 22.

"Jahresabschlüsse der Unternehmen in der Bundesrepublik Deutschland 1965 bis 1981," Sonderdrucke der Deutschen Bundesbank, Nr. 5, September 1983.

Appendix Table UK-1

United Kingdom
The Value of Direct Investment Abroad
(£ million)

	Private								
		Nonbank							
			Excluding Insurance & Property						
	Total (1)	Total (2)	Total (3)	Oil Companies (4)	Other (5)	Insurance (6)	Property (7)	Banks (8)	Public Corporations (9)
1986[a]	90,298	84,578						5,720	524
1985	74,366	71,412						2,954	466
1984	78,411	77,470						941	534
1983	57,916	56,004						1,912	452
1982	51,779	49,794						1,985	499
1981[b]	44,649	42,902						1,747	511
1980[c]	33,850	31,340	27,840	7,550	20,290	2,420	1,080	2,510	NA
1979[d]	31,570	29,730	26,350	6,650	19,700	2,480	900	1,840	
1979[e]	28,990	27,150	26,350	6,650	19,700	800	NA	1,840	
1978[e]	25,460	24,150	23,420	4,200	19,220	730	"	1,310	
1977[f]	20,097	18,945	18,350	3,550	14,800	595	"	1,152	
1976[f]	19,613	18,585	18,000	3,400	14,600	585	"	1,028	
1976[g]	18,880	NA	18,000	3,400	14,600	g	"	710[f]	
1975[g]	15,235	NA	14,570	3,050	11,520	g	"	470[f]	
1974[i]	13,320	NA	12,720	2,600	10,120	"	"	600	
1973[i]	11,590	NA	10,935	2,250	8,685		"	655	
1972[j]	10,790		10,110	2,250	7,860	"	"	680	
1971[k]	9,290		8,815	2,150	6,665	"	"	475	
1970[k]	8,930		8,455	2,050	6,405	"	"	475	
1969[k]	8,440		7,965	1,900	6,065	"	"	475	
1968[l]	7,750		7,235	1,650	5,585			515	
1967[m]	7,280		6,785	1,600	5,185			495	
1966[n]	6,285		5,900	1,500	4,400			385	
1965									
1964[o]	5,585		5,185	1,275	3,910			400	
1963									
1962[k]	4,885		4,510	1,100	3,410			375	

[a]Nov. 1987

[b]Sept. 1986 [c]Sept. 1985 [d]June 1984 [e]June 1982; insurance is for investment in the U.S. only. Property investment is excluded. [f]June 1980 [g]June 1979; banks include insurance and are for investment in U.S. only. [h]Included under Banks. [i]June 1977 [j]June 1976 [k]June 1974 [l]June 1973 [m]June 1972 [n]June 1971 [o]Sept. 1970.

Source: Bank of England Quarterly Bulletin, various issues, as indicated by footnotes.

Appendix Table UK-2

United Kingdom

Net Operating Assets and UK Stake in Overseas Subsidiaries of U.K. Companies, 1955-1964
(£ million)

	Oil Companies	Mining, Plantations, and Manufacturing		Total
	U.K. Stake	Net Operating Assets	U.K. Stake	
1964	1,275	2,141	1,623	3,416
1963	1,170	2,000	1,536	3,170
1962	1,088	1,883	1,453	2,971
1961	1,002	1,807	1,384	2,809
1960	922	1,695	1,310	2,617
1959	840	1,540	1,206	2,380
1958	738	1,464	1,140	2,202
1957	662	1,327	1,057	1,989
1956	572	1,205	962	1,777
1955	NA	1,074	886	NA

Source: Reddaway (1968), Table IV.3

Appendix Table UK-3

United Kingdom

Assets of Large Nonfinancial Corporations

	Total Net Assets £ Million
Listed and Unlisted Companies	
1985	178,701
1984	179,254
1983	160,111
1982	149,911
1981	140,346
1980	123,200
1979	110,386
1978	99,309
1977	85,580
Listed Companies	
1977	52,132
1976	46,917
1975	40,707
1974	35,918
1974	35,676
1973	32,081
1972	27,769
1971	24,428
1970	22,454
1969	21,349
1969	21,745
1968	21,049
1967	20,323
1966	19,872
1965	18,985
1964	17,516
1964	17,087
1963	16,122
1962	15,140
1961	14,221
1960	13,223
1960	13,495
1959	12,409
1958	11,449
1957	10,805
1956	9,988
1955	9,215

Notes to Appendix Table UK-3

1977-83: Listed and unlisted limited companies registered in Great Britain with a capital employed in the current year of more than £ 4.16 million, excluding companies whose main activity is insurance, banking or finance.

1974-77: Fixed panel of companies.

1969-74: Companies with net assets of £ 2 million or more or gross income of £ 200,000 or more in 1968.

1964-69: Companies with net assets of £ 500,000 or more or gross income of £ 50,000 or more in 1964.

1960-64: Companies with net assets of £ 500,000 or more or gross income of £ 50,000 or more in 1960.

1955-60: Includes a few unquoted companies because of their importance.

Sources: 1982-85, UK, Central Statistical Office (1988), Table 17.26
1977-81, UK, Central Statistical Office (1986), Table 17.26
1969-77, UK, Central Statistical Office (1982), Table 17.51
1964-69, UK, Central Statistical Office (1974), Table 384
1960-64, UK, Central Statistical Office (1971), Table 384
1955-60, UK, Central Statistical Office (1966), Table 374

Appendix Table UK-4

United Kingdom
Direct Investment Abroad as Per Cent of Assets of Large Nonfinancial Corporations and Listed Companies

	As Percent of Assets of Large Nonfinancial Corporations			As Percent of Assets of Listed Companies				Net Operating Assets of Overseas Mining, Plantations, and Manufacturing Subsidiaries		
	Private Direct Investment excl. Banks		Private Direct Invest. excl. Banks, Property Cos., and Insurance Outside the U.S.	Private Direct Investment excluding Insurance and Property Companies				Plus UK Stake in Oil Companies		Excl. UK Stake in Oil Companies
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1985	40.0		(35.6)							
1984	43,2		(38.4)							
1983	35.0		(31.0)							
1982	33.2	31.7	(29.0)							
1981	30.5	30.3	(27.1)							
1980	25.4	27.0	22.6							
1979	26.9	24.6	23.9							
1978		24.3	23.6							
1977		22.1	21.4	35.2						
1976			(23.3)	38.4						
1975			(21.8)	35.8						
1974			(21.5)	35.4	35.7					
1973			(20.5)		34.1					
1972			(21.9)		36.4					
1971			(21.7)		36.1					
1970			(22.7)		37.7					
1969			(22.5)		37.3	36.6				
1968			(21.1)			34.4				
1967			(20.5)							
1966			(18.3)			33.4				
1965										
1964			(18.2)			29.6	30.3	20.0		
1963			(17.9)					19.7		
1962			(17.8)				29.8	19.6		
1961			(18.0)					19.8		
1960			(18.0)					19.8	19.4	

Appendix Table UK-4 (concluded)

	As Percent of Assets of Large Nonfinancial Corporations			As Percent of Assets of Listed Companies				Net Operating Assets of Overseas Mining, Plantations, and Manufacturing Subsidiaries		
	Private Direct Investment excl. Banks		Private Direct Invest. excl. Banks, Property Cos., and Insurance Outside the U.S.	Private Direct Investment excluding Insurance and Property Companies				Plus UK Stake in Oil Companies		Excl. UK Stake in Oil Companies
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1959			(17.8)						19.2	
1958			(17.8)						19.2	
1957			(17.1)						18.4	
1956			(16.5)						17.8	12.1
1955			(16.0)						NA	11.7

Figures in parentheses are extrapolations of the 1980 and 1977 ratios by those in the other columns.

Source: Appendix Tables UK-1 and UK-3.

Appendix Table J-1

Japan

Measures of Direct Investment Abroad

	Overseas Direct Investment ($U.S. Mill.)	Exchange Rates: Yen per $U.S.		Overseas Direct Invest. (Yen Bill.) Translated by	
		Basic Rate	Foreign Exchange Bank Selling Rate	Basic Rate	Foreign Exchange Bank Selling Rate
	(1)	(2)	(3)	(4)	(5)
1987		151	124.05		
1986	58,071	185	161.60	10,743.1	9,384.3
1985	43,974	254	201.35	11,169.4	8,854.2
1984	37,921	231	252.05	8,759.8	9,558.0
1983	32,178	237	233.45	7,626.2	7,512.0
1982	28,969	233	236.75	6,749.8	6,858.4
1981	24,506	210	221.10	5,146.3	5,418.3
1980	19,612	242	204.80	4,746.1	4,016.5
1979	17,227	206	241.00	3,548.8	4,151.7
1978	14,329	234	195.40	3,353.0	2,799.9
1977	11,958	308	241.05	3,683.1	2,882.5
1976	10,313	308	293.70	3,176.4	3,028.9
1975	8,322	308	306.15	2,563.2	2,547.8
1974	6,559	308	301.60	2,020.2	1,978.2
1973	4,546	308	281.00	1,400.2	1,277.4
1972	2,574	308	302.50	792.8	778.6
1971	1,851	308	315.70	570.1	584.4

Sources:

Col. 1: Bank of Japan (1988), Table on Assets and Liabilities vis-á-vis Non-Residents, p. 260, and similar tables in earlier volumes.

Cols. 2 & 3: Ibid., Table on Foreign Exchange Rates, p. 261, and similar tables in earlier volumes.

Col. 4: Col. 1 x Col. 2

Col. 5: Col. 1 x Col. 3

Appendix Table J-2

Japan

Measures of Employment in Overseas Affiliates
and in Japan

	Reported Employment (1)	Est. Coverage Ratio No. of Parents (2)	Est. Coverage Ratio Equity (3)	Est. Employment (000) Adj. for Coverage Ratio (4)	Employment in Japan, Annual Average (000) (5)
1987					59,110
1986					58,530
1985					58,070
1984	925,754	49.1	(78.8)	1,174.8	57,660
1983	672,607	38.1	57.3	1,173.8	57,330
1982	881,078	45.0	(72.9)	1,208.6	56,380
1981	769,690	39.4	(65.0)	1,184.1	55,810
1980	716,139	43.1	72.1	993.3	55,360
1979	719,090	48.8	85.0	846.1	54,790
1978	725,752	42.7	85.3	850.8	54,080
1977	769,893	50.1	78.1	985.8	53,420
1976	566,124	36.1	55.1	1,027.4	52,710
1975	653,680	50.8	80.4	813.0	52,230
1974	643,738	50.2	78.4	821.1	52,370
1973					52,590
1972	330,926	50.5	72.3	457.7	51,260

Source:

Cols. 1, 2, and 3: MITI data, collected by M. Fujita, except for 1981, 1982, and 1984 in Col. 3, estimated from Col. 2 by equation Y = 8.86 + 1.42X where Y = Percent of Equity covered and X = Percent of Parents covered.
Col. 4: Col. 1 ' Col. 3
Col. 5: Bank of Japan (1988), Table on "Labor Force Survey," p. 301, and similar tables in earlier volumes.

Appendix Table J-3

Japan
Measures of National Wealth and Assets
(Yen Billion)

	Total National		
	Tangible Assets (1)	Wealth (2)	Total Assets of Incorporated Business (3)
1986	2,086,637	2,120,002	655,784
1985	1,817,366	1,850,340	601,955
1984	1,710,557	1,727,731	551,530
1983	1,627,760	1,636,590	525,359
1982	1,570,544	1,576,295	483,057
1981	1,478,895	1,481,189	464,731
1980	1,337,696	1,340,487	429,457
1979	1,160,961	1,166,889	377,730
1978	982,300	990,774	338,799
1977	872,265	879,035	315,654
1976	808,410	811,359	299,517
1975	735,191	737,352	273,762
1974	679,337	682,091	246,630
1973	615,623	619,632	211,209
1972	469,220	473,491	164,610
1971	361,452	364,462	157,605
1970			137,222
1969			115,143
1968			95,856
1967			80,553
1966			67,217
1965			59,677
1964			53,131
1963			44,547
1962			36,067
1961			31,264

Source:

Cols 1 & 2: Bank of Japan (1988), Table on Closing Stocks, Capital Transactions and Reconciliations of Assets and Liabilities for the Nation, p. 352, and similar tables in earlier volumes.

Col. 3: Ibid. Table on Financial Statements of Incorporated Business, p. 276, and similar tables in earlier volumes.

Appendix Table N-1

Netherlands

Foreign Direct Investment Position

	Millions of Guilders (1)	No. and Assets of Corporations Quoted on Amsterdam Stock Exch. No. of Companies (2)	Assets (3)
1984		118	311,618
1983	119,886	118	277,100
1982	104,291	118	256,226
1981	99,508	124	245,108
1980	89,685	133	227,751
1979	71,974	136	198,236
1978	60,572	148	168,868
1977	57,805	157	161,170
1976	51,517	168	151,348
1975	53,561		
1974	49,622		
1973	43,699		

Sources:

Col 1: van Niewkerk and Sparling (1985), Table 4, p. 24
Cols. 2 and 3: Netherlands Central Bureau of Statistics, Statistical Yearbook of the Netherlands,
as follows: 1984:1986, Table 10, p. 151
1983:1986, Table 10, p. 151
1982:1985, Table 9, p. 152
1981:1982, Table 026, p. 270
1980:1981, Table 026, p. 274
1979:1980, Table 026, p. 273
1978:1979, Table 024, p. 266
1977:1978, Table 024, p. 256
1976:1977, Table 023, p. 223

Appendix Table C-1

Canada

Measures of Direct Investment Position and Total Assets of Corporations

	Value of Direct Investment Abroad (Mill. Can. $) (1)	Total Assets of Canadian Corporations (Mill. Can. $) (2)
1986	56,100	
1985	49,909	1,554,287
1984	44,225	1,427,123
1983	37,793	1,309,884
1982	35,558	1,268,732
1981	33,847	1,188,362
1980	26,967	984,151
1979	20,496	845,828
1978	16,422	720,198
1977	13,509	619,716
1976	11,491	546,366
1975	10,526	483,130
1974	9,210	428,101
1973	7,835	360,176
1972	6,715	310,343
1971	6,538	275,311
1970	6,188	250,373
1969	5,211	212,215
1968	4,617	190,115
1967	4,030	172,865

Source: Col. 1, Statistics Canada (1986), and earlier issues.

Col. 2, Statistics Canada (1985), and earlier issues.

Appendix Table K-1

Korea

Measures of Direct Investment Abroad

	Overseas Direct Investment ($ U.S. Mill) (1)	Exchange Rate: Won per $U.S. (Year-end) (2)	Overseas Direct Investment (Won bill) (3)
1985	476	890.20	423.7
1984	447	827.40	369.8
1983	386	795.50	307.1
1982	290	748.80	217.1
1981	174	700.50	121.9
1980	142	659.90	93.7

Sources: Col. 1: The Korea Development Bank (1988).

Col. 2: International Monetary Fund (1988), p. 457.

Col. 3: Col. 1 x Col. 2

Appendix Table K-2

Measures of Total Assets of Korean Corporations

	Total Assets (In million US$) (1)	Total Assets (In billion Won) (2)	Total Assets of Heavy and Chem. Ind. (In bil. Won) (3)	Total Assets of Light Ind. (In bil. Won) (4)	Exchange Rate: Won per $U.S. (Year-End) (5)
1985	66,953	59,602	38,282	21,320	890.20
1984	61,395	50,798	32,220	18,579	827.40
1983	59,895	47,646	28,130	19,516	795.50
1982	56,649	42,419	24,856	17,653	748.80
1981	51,769	36,264	21,632	14,632	700.50
1980	42,593	28,107	15,767	12,340	659.90
1979	40,158	19,437	10,748	8,689	484.00

Sources: Col. 1: Col. 2 ÷ Col. 5
Col. 2: Col. 3 + Col. 4
Col. 3 and 4: The Bank of Korea (1986), table on Composite Balance Sheets of Corporations, pp. 474-476, and similar tables in earlier issues.
Col. 5: International Monetary Fund (1988), p. 457.